UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,312	10/07/2003	Billy Gayle Moon	10-004	3219

23164 7590 11/25/2009
LEON R TURKEVICH
2000 M STREET NW
7TH FLOOR
WASHINGTON, DC 200363307

EXAMINER	
AHN, SANGWOO	

ART UNIT	PAPER NUMBER
2168	

MAIL DATE	DELIVERY MODE
11/25/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/679,312
Filing Date: October 07, 2003
Appellant(s): MOON ET AL.

MOON ET AL.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 8/10/2009 appealing from the Office action mailed on 1/8/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2004/0134336	Solomon	7-2004

Peter Burden, "Routing in the Internet," [online], Jan 17, 1999, [retrieved April 11, 2006], retrieved from www.scit.ac.uk/~jphb/comms/iproute.html, pages 1-8

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 2, 4 – 11, 12 – 13, 15 – 22, 34 – 35 and 37 – 50, 52 and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication Number 2004/0134336 issued to Neal Solomon (hereinafter "Solomon").

■ Regarding claim 1, Solomon discloses (for contested claim limitations, please see ***Response to Arguments*** section below for detailed explanations),

A method in a network node, the method comprising:

establishing by the network node a world object database in the network node and that stores world objects, the world objects representing respective attributes of an infosphere of a network that includes the network node (Figure 2 elements 220: sharing network resources between MRVs, 230, 240 and 250, Figure 6 elements 610 and 630, Figure 23 element 2310, paragraph 160 lines 6 – 10, paragraph 173 lines 6 – 7, et seq.), the world object database including smart world objects as a subclass of the world objects, the establishing including the smart world objects generating decisions based on evaluation of selected world objects (Figure 5 element 530, figure 6 element 650, Figure 2 element 230: computation resources shared between MRVs with parallel processing capabilities, paragraph 23 lines 1 – 5, paragraph 30 lines 9 - 10, et seq.);

adding by the network node, as world objects to the world object database, sensor objects from sensor data generated in response to detected attributes within the infosphere, the sensor objects including network node objects associated with the network node (paragraph 23 lines 1 – 5, paragraph 30 lines 9 - 10, Figure 2 element 220, Figure 6 element 640, Figure 3 element 2310, Figure 29 element 2950, et seq.);

forming the network by the network node based on: discovery of other network nodes, adding second network node objects as world objects to the world object database and representing attributes of the other network nodes, and synchronizing the world objects with the other network nodes (Figure 23 element 2310, Figures 3 and 5, Figure 16 element 1675, Figure 2 element 220: share resources between MRVs, et seq.) enabling the decisions by the network node (Figure 5 element Figure 2 element 0230: computation resources shared between MRVs with parallel processing capabilities, Figure 17 element 1740: each MRV responds to environmental stimulus → suggests each “network node” is capable of making its own local decisions, et seq.) to be coordinated with the other network nodes (Figures 3 and 5, Figure 16 element 1675, paragraphs 161 and 163 – 164, Figure 2 element 0230: computation resources are shared between MRVs with parallel processing capabilities, Figure 24 element 2430: coordination of a swarm’s overall planning is made, et seq.), wherein the network node and the other network nodes execute their respective decisions autonomously of each other (Figures 20 – 22, Figure 6 element 650, Figure 23 element 2310: each MRV tracks all other MRVs in swarm in real time → suggests each “network node” is capable of making independent decisions, Figure 18 element 1840: MRV’s use “local” rules to interact with each other and with the environment, et seq.); and

performing by the network node a change in at least one of position, velocity, orientation, and wireless communication characteristics of the network node based on detecting a world object specifying a directive that is based on at least one of the decisions, for optimization of the network node relative to the other network nodes (Figure 16 element 1670: compute optimum route, Figure 73 elements 7360 and 7370, paragraph 40, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 280 lines 1 – 2; 22 – 24, paragraph 283 lines 10 – 14, et seq.).

- Regarding claim 2, Solomon discloses,

wherein the synchronizing of the world objects includes receiving remote world objects from the other network nodes, and storing the remote world objects as world objects in the world object database, the smart world objects generating updated decisions based on the remote world objects (Figure 2 lines 230 and 240, Figure 6 elements 630 and 640, paragraph 13 elements 1310 and 1320, et seq.).

- Regarding claim 4, Solomon discloses,

wherein the establishing step includes instantiating execution of a world factory process configured for initializing the world object database and adding/removing the world objects to/from the world object database (Figure 2 element 230, Figure 4 elements 420 and 430, paragraph 162 lines 6 - 7, paragraph 280 lines 1 – 17, et seq.).

- Regarding claim 5, Solomon discloses,

wherein the adding and performing steps are executed based on instantiating execution of a robot factory process configured for generating, for each smart world object, a corresponding robot objects as one of the world objects, the adding step executed by a sensor process in at least one robot object and the performing step executed by a motor complex process in at least one robot object (Figure 73 elements 7360 and 7370, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, et seq.).

- Regarding claim 6, Solomon discloses,

wherein the smart world objects own respective brain objects configured for generating the decision, each brain object owning associated reaction objects configured for generating respective advice elements from associated world objects, each brain object configured for: determining the corresponding decision based on the associated advice elements relative to respective influence factors, and storing the decision as a vector object (Figure 13 elements 1310, 1320, 1330 and 1340, Figure 17, Figure 18 element 1840, Figure 37 element 3770, paragraph 173, paragraph 220 lines 15 – 17, et seq.).

■ Regarding claim 7, Solomon discloses,

wherein the performing step includes sending the directive by the motor complex process to a mobility platform in the network node in an attempt to implement the vector object (Figure 73 elements 7360 and 7370, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, et seq.).

■ Regarding claim 8, Solomon discloses,

wherein each world object owns an associated three-dimension shape object, the adding step including generating a request, by one of the robot objects, to the world factory for generation of an obstacle object in response to the sensor process detecting an obstacle in the infosphere (Figure 6 elements 610, 620 and 630, Figure 11, Figure 17, Figure 29 elements 2940 and 2950, Figure 43, Figure 73, et seq.).

■ Regarding claim 9, Solomon discloses,

Wherein establishing step includes adding world domains as a subclass of the world objects, each world domain configured for: (1) owning at least one world object, (2) having a native vector space, (3) encompassing a location object specified in the corresponding native vector space, and (4) having a transformational matrix configured for mapping the corresponding native vector space to other vector spaces used in the world object database, each world object configured for owning an associated three-dimensional object (Figure 6 elements 610, 620 and 630, Figure 11, Figure 17, Figure 29 elements 2940 and 2950, Figure 43, Figure 73, paragraph 202, et seq.).

■ Regarding claim 10, Solomon discloses,

wherein the establishing step further includes adding way points as a subclass of the world objects, each waypoint representing an attribute relative to one of the vector spaces of the world object database (paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, Figure 6 elements 610, 620 and 630, Figure 11, Figure 17, Figure 29 elements 2940 and 2950, Figure 43, Figure 73, paragraph 202, et seq.).

■ Regarding claim 11, Solomon discloses,

wherein the establishing step further includes nesting a group of the world domains, each identifiable as child world domains, within at least one of the world domains identifiable as a parent world domains, the child world domain inheriting the attributes of the associated parent world domain (Figure 19 element 1910, Figure 41, et seq.).

■ Claims 12 – 13 and 15 – 22 are rejected based on the same rationale discussed in claims 1 – 2 and 4 – 11 rejections.

■ Claims 34 – 35 and 37 – 44 are rejected based on the same rationale discussed in claims 1 – 2 and 4 – 11 rejections.

■ Regarding claim 45, Solomon discloses (for contested claim limitations, please see ***Response to Arguments*** section below for detailed explanations),

A method for controlling a network node in a network, the method comprising:

receiving by the network node detected attribute information that indicates a detected attribute relative to any one of the network node or the network, the detected attribute including any one of a communication attribute or a physical attribute (paragraph 23 lines 1 – 5, paragraph 30 lines 9 - 10, Figure 2 element 220, Figure 6 element 640, Figure 3 element 2310, Figure 29 element 2950, et seq.);

generating by the network node a movement directive based on the network node executing an optimization of routing metrics relative to the received detected attribute information and according to a prescribed routing protocol (Figure 73 elements 7360 and 7370, paragraph 40 lines 9 – 14, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 280 lines 1 - 2 and 22 - 24, paragraph 283 lines 10 – 14, et seq.);

the network node synchronizing the world objects with the other network nodes (Figure 23 element 2310, Figures 3 and 5, Figure 16 element 1675, Figure 2 element 220: share resources between MRVs, et seq.) enabling the decisions by the network node (Figure 2 element 0230: computation resources shared between MRVs with parallel processing capabilities, Figure 17 element 1740: each MRV responds to environmental stimulus → suggests each "network node" is capable of making its own local decisions, et seq.) to be coordinated with the other network nodes (Figures 3 and 5, Figure 16 element 1675, paragraphs 161 and 163 – 164, Figure 2 element 0230: computation resources are shared between MRVs with parallel processing capabilities, Figure 24 element 2430: coordination of a swarm's overall planning is made, et seq.), wherein the network node and the other network nodes execute their respective decisions autonomously of each other (Figures 20 – 22, Figure 6 element 650, Figure

23 element 2310: each MRV tracks all other MRVs in swarm in real time → suggests each "network node" is capable of making independent decisions, Figure 18 element 1840: MRV's use "local" rules to interact with each other and with the environment, et seq.); and

sending by the network node the movement directive to a mobility platform associated with the network node, the movement directive causing the mobility platform to implement the optimization by implementing a physical change for the network node (Figure 73 elements 7360 and 7370, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, et seq.).

- Regarding claim 46, Solomon discloses,

receiving sensor information from the mobility platform and indicating the physical attribute (paragraph 23 lines 1 – 5, paragraph 30 lines 9 - 10, Figure 2 element 220, Figure 6 element 640, Figure 3 element 2310, Figure 29 element 2950, et seq.); or

receiving the detected attribute information from a second network node in the network via a wireless communications link.

- Regarding claim 47, Solomon discloses,

changing any one of a position of the network node, velocity of the network node, or network interface utilization in the network node (Figure 73 elements 7360 and 7370, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, et seq.).

- Regarding claim 48, Solomon discloses (for contested claim limitations, please see ***Response to Arguments*** section below for detailed explanations), A network node of a network, the network node comprising:

an executable resource configured for generating a movement directive based on executing an optimization of routing metrics relative to received network attribute information and according to a prescribed routing protocol, the received network attribute information indicating a detected attribute relative to any one of the network node or at least one of the other network nodes in the network, the detected attribute including any one of a communication attribute or a physical attribute, the executable resource further configured for synchronizing the detected attribute information with the other network nodes (Figure 2 element 220: share resources between MRVs, et seq.) enabling the movement directive generated by the network node to be coordinated with the other network nodes (Figures 3 and 5, Figure 16 element 1675, paragraphs 161 and 163 – 164, Figure 2 element 0230: computation resources are shared between MRVs with parallel processing capabilities, Figure 24 element 2430: coordination of a swarm's overall planning is made, et seq.), wherein the network node and the other network nodes execute their respective optimization of routing metrics autonomously of each other (Figure 16 element 1670: compute optimum route, Figure 73 elements 7360 and 7370, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, et seq.) (Figure 73 elements 7360 and 7370, paragraph 40 lines 9 – 14, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 280 lines 1 - 2 and 22 - 24, paragraph 283 lines 10 – 14, paragraph 23 lines 1 – 5, paragraph 30 lines 9 - 10, Figure 2 element 220, Figure 6 element 640, Figure 3 element 2310, Figure 29 element 2950, et seq.); and a mobility platform configured for implementing the optimization by causing a physical change for the network node in response to the movement directive (Figure 73 elements 7360 and 7370, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, et seq.).

■ Regarding claim 49, Solomon discloses,

sensors configured for generating sensor information, the mobility platform providing the sensor information to the executable resource as the received network attribute information (paragraph 23 lines 1 – 5, paragraph 30 lines 9 - 10, Figure 2 element 220, Figure 6 element 640, Figure 3 element 2310, Figure 29 element 2950, et seq.).

■ Regarding claim 50, Solomon discloses,

changing any one of a position, velocity, or network interface utilization in the network node (Figure 73 elements 7360 and 7370, paragraph 171 lines 8 – 11, paragraph 176 line 23, paragraph 283 lines 10 – 14, et seq.).

■ Regarding claim 52, Solomon discloses,

sending an update to another node in the network that identifies the movement directive generated by the network node (Figure 23 element 2310, et seq.).

■ Regarding claim 54, Solomon discloses,

generating an update that is output by the network node to another node in the network, the update identifying the movement directive generated by the executable resource (Figure 23 element 2310, et seq.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 14 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Solomon and "*Routing in the Internet*" (henceforth referred to as Burden).

- Regarding claim 3, Solomon discloses the method of claim 1 and discovering the other network nodes and synchronizing the world objects, as discussed in claim 1 rejection.

Solomon does not explicitly indicate discovering the nodes based on a mobile Internet Protocol (IP).

However, Burden discloses discovering the nodes based on a mobile Internet Protocol (IP) in page 6; section The OSPF (RFC 1247) Protocol, ¶ 2. At the time the invention was made, it would have been obvious to a person of obvious skill in the data processing art to modify Solomon's method of discovering network nodes and sharing objects between them to incorporate Burden's routing method, thus enabling network nodes to identify each other, establish common operating procedures and also request specific link information from neighbors.

- Claims 14 and 36 are rejected based on the same rationale discussed in claim 3 rejection.

(10) Response to Argument

Appellant's arguments have been fully considered but are not persuasive.

Prior to making arguments in view of Solomon, Appellant first explained the claimed features of the independent claims in view of the specification. However, it appears that Appellant is trying to equate the detailed disclosure in the specification with what is actually claimed. Although the broadest reasonable interpretation of the claimed limitations must be given in view of the specification, the entire detailed disclosure cannot be brought into that interpretation unless those specific elements are actually reflected within the claims. Therefore, it is noted that the features upon which applicant relies (i.e., See Appeal Brief, page 11 lines 11 – 17: "a reaction by a 'reaction object' reacts to stimulus by suggesting a change in the form of an advice element; in contract, a decision … considers various elements … based on different weighting factors … hence … distinguishes between 'decisions' and 'reactions'" → "reaction" and "decision" are not distinguishable in the claim because "reaction" is not claimed at all, page 13 lines 7 – 11: "synchronizing of the world object causes all of these four types of world object [including smart world objects, sensor objects, second network node objects, and a world object specifying a directive] to be synchronized with the other network nodes" → the claim merely recites synchronizing the world objects and is silent on other types of objects with regards to the synchronizing, et seq.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant's main arguments in view of Solomon are as follows:

1. Page 13, A1(b)(1): No Disclosure that The Network Nodes Generate their Respective Decisions
2. Page 16, A1(b)(2): No Disclosure that The Network Nodes Generate their Respective Decisions Autonomously of Each Other
3. Page 18, A1(b)(3): No Disclosure that the Network Node Synchronizes with the Other Network Nodes

Examiner disagrees with the Appellant's arguments for the following reasons:

1. Appellant argues that, since all decisions are executed by the lead MRV (analogous to the claimed "the network node"), other MRVs in the squad known as drone MRVs (analogous to the claimed "the other network nodes") do not execute "their own respective decisions." However, this contention is not only wrong, but also based on a very narrow interpretation of the term "decision," which in fact is open to varying interpretations.

   First of all, the term "decision" means conclusion or judgment, or act of reaching a conclusion (based on American Heritage Dictionary of English, 4th Ed.). There are numerous sections in Solomon that clearly teach drone MRVs generating their own decisions:

• Figure 6 element 650, paragraph 165 lines 13 – 15, disclose that the drone MRV located closet to the target(s) measures the target(s) distance, velocity and vector.

• Figure 16 element 1675 discloses that the drone MRVs activate most effective firing sequence to achieve mission success.

• Figure 17 elements 1740 and 1750, paragraph 179 lines 9, disclose that each MRV responds to environmental stimulus and behaves in a specific way according to rules of behavior. Figure 22, paragraph 193 lines 11 – 18 further disclose that MRVs default to simple behavior-based mode to interact with each other and with the environment when presented with resource constraints.

• Figure 20, paragraph 191, disclose self diagnostic process carried out by each MRV, in order decide whether to continue on mission, to return to home base, or to be replaced with new MRVs. Figure 21, paragraph 192 further disclose that each MRV decides whether to self-destruct or to wait for collection, when it is low on power.

The above sections describe specific instances where drone MRVs “decide” to act or function in certain ways when they are confronted by distinctive situations. Therefore, Solomon discloses that the MRVs (analogous to the claimed “the other network nodes”) “generate their own respective decisions” as described above.

Appellant further argued on page 16 that Solomon provides no reference whatsoever to the claimed term “routing”, and therefore cannot disclose the claimed optimization of routing metrics according to a prescribed routing protocol (See claim 45 lines 8 – 9: “executing an optimization of routing metrics … according to a prescribed routing protocol”). In making this argument, Appellant again relies heavily on the specification to argue that Solomon does not teach the claimed features. As previously noted, although the claims are interpreted in light of the specification, limitations from the specification (i.e., See Appeal Brief, page 16 lines 6 – 11: “routing protocol … considers movement of its physical platform … including how to route data packets” → the claim merely recites that the network node executes “an optimization of routing metrics relative to the received detected attribute information and according to a prescribed routing protocol,” and is silent on whether it deals with movement of physical platform or data packets) are not read into the claims.

The term “routing” means determining a line of travel, course or territory, or means of reaching a goal (based on American Heritage Dictionary of English, 4th Ed.). Given this broadest reasonable interpretation, optimization of routing metrics can be interpreted as directing the network nodes into the most effective or beneficial geographical structure or form.

Therefore, contrary to Appellant’s assertion, Solomon clearly discloses the claimed feature of “the network node executing an optimization of routing metrics … according to a prescribed routing protocol" in Figure 73 and paragraph 283 (lead MRV (analogous to the claimed "the network node") transmits directions to MRVs (analogous to the claimed "the other network nodes") to organize geometric structure of MRVs (analogous to "optimization of routing metrics") according to selected configuration (analogous to "according to routing protocol")), paragraph 40 lines 8 – 15 (the system identifies the most efficient allocation of resources and constantly reroute a dynamic network … identify the optimal geometric grouping as well as a dynamic geometric configuration), paragraph 176 line 23 (enable MRVs to move to the optimum route), and paragraph 280 lines 1 – 2; 22 – 24 (reroute the network to the most efficient route … optimum communication range of a swarm must also be calculated by the lead MRV in order to maximize communications effectiveness).

2. Appellants also argued that drone MRVs cannot generate decisions "autonomously of each other", since they can only be controlled by external instructions provided by the lead MRV. This contention is also wrong. As previously discussed, Solon discloses the following:

   - Figure 6 element 650, paragraph 165 lines 13 – 15, disclose that the drone **MRV closet to the target(s)** measures the target(s) distance, velocity and vector → it is clear that the drone closest to the target carries out the distance measuring function by itself.

- Figure 17 elements 1740 and 1750, paragraph 179 lines 9, disclose that **each** MRV responds to environmental stimulus and behaves in a specific way according to rules of behavior. Figure 22, paragraph 193 lines 11 – 18 further disclose that MRVs default to simple behavior-based mode to interact with each other and with the environment when presented with resource constraints.
- Figure 20, paragraph 191, disclose **self diagnostic** process carried out by **each** MRV, in order decide whether to continue on mission, to return to home base, or to be replaced with new MRVs. Figure 21, paragraph 192 further disclose that **each** MRV decides whether to self-destruct or to wait for collection, when it is low on power.

The above sections describe specific instances where drone MRVs, within their own individual capacity, "decide" to act or function in certain ways when they are confronted by distinctive situations. Therefore, Solomon discloses that the MRVs (analogous to the claimed "the other network nodes") generate decisions "autonomously of each other."

3. Lastly, Appellant argued that Solomon does not disclose that the network node synchronizes "with the other network nodes," because transmission or coordination of data only occurs from the drone MRVs to the lead MRV, and not the other way around. This assertion is also incorrect.

   First of all, according to the claim, the type of data that is synchronized between the lead MRV and the drone MRVs are world objects representing respective attributes of an infosphere. Given the broadest reasonable interpretation, the world object can be interpreted as any information that describes the network or the outside environment where the MRVs are located.

In order to anticipate the claimed feature, Solomon must disclose that this information is shared among the MRVs (including both the lead and the drone MRVs) and the decisions made by the lead MRV must be "coordinated" (according to American Heritage Dictionary of English, 4th Ed., to be harmonized in a common action or effort) with the drone MRVs. It is blatantly clear that this is exactly what Solomon teaches:

- Figure 23 element 2310 discloses that each MRV tracks all other MRVs in swarm in real time → suggests that each MRV (could be either lead MRV or drone MRV) retain information about other MRVs' location, status, environmental stimuli, etc.
- Figures 3 and 5, paragraphs 161 and 163 – 164, disclose that a) each MRV knows which specific target(s) to attack at the designated times, b) lead MRV orders MRVs to targets by specifying the target positions, and c) MRVs employ various approaches to coordination and targeting, including the use of external sensor data to build maps and plans in order to move toward and strike a target → suggests that the MRVs are coordinated with the attack decision by the lead MRV.

- Figure 16 element 1675 discloses that MRVs "coordinate" to activate most effective firing sequence.

For the foregoing reasons, it is clear that the aforementioned features and the Appellant's claims 1 – 22, 34 – 50, 52 and 54 are anticipated by Solomon.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Sangwoo Ahn

/Sangwoo Ahn/

Examiner, Art Unit 2168

Conferees:

/Tim T. Vo/

Supervisory Patent Examiner, Art Unit 2168

/Hosain T Alam/

Supervisory Patent Examiner, Art Unit 2166